ABSTRACT

The invention is intended to reduce disk access during data transfer from a disk in which occurrence of failure is anticipated to a spare disk as much as possible so that occurrence of double-failure is prevented in advance. When occurrence of failure in a disk which configures a RAID group, contents stored in the disk is copied to the spared disk. Simultaneously, another RAID group is paired with the above described RAID group and a secondary volume is provided therein. A write request is directed to the secondary volume. A differential bitmap controls a update data. Data which is not updated is read out from the primary volume, and data which is already updated is read from the secondary volume. When data transfer is completed, contents stored in the secondary volume are copied to the primary volume.